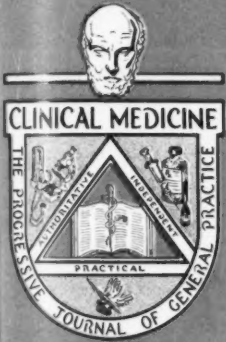


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# Clinical Medicine



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## LEADING ARTICLES

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VOLUME 48

NUMBER 5

*Abbott Laboratories Announce  
the Development of  
Nembutal-C*

**NEMBUTAL-C\***, the calcium salt of pentobarbital, has a pharmacologic action identical with that of the sodium salt, Nembutal. Unlike Nembutal, however, Nembutal-C may be prepared in the form of friable tablets which disintegrate rapidly in the stomach, and thus give a more uniform and slightly more rapid action. This action is of relatively short duration. Nembutal-C is rapidly and completely destroyed in the body.

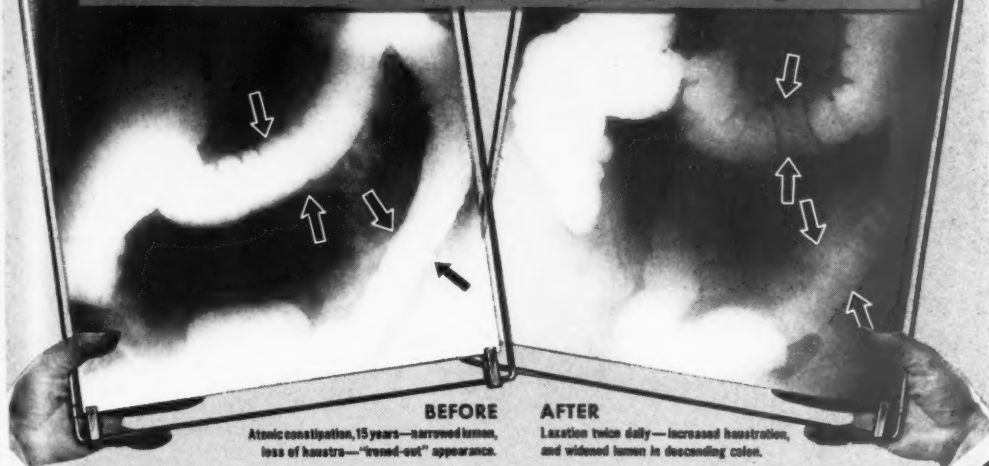
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\*Nembutal-C is the trade-mark for pentobarbital calcium, Abbott



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**AFTER**

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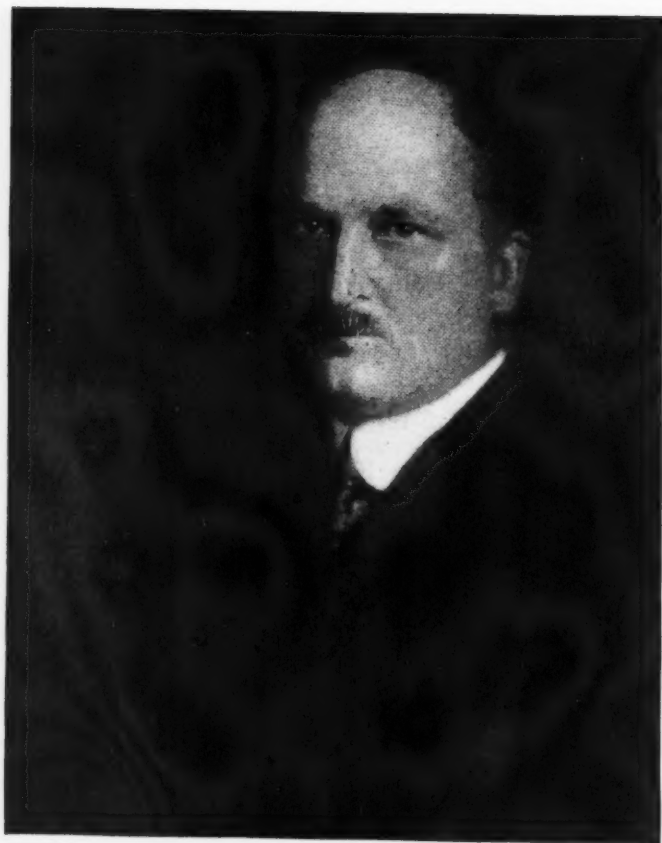
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## ★ *Editorial* ★

### **Dr. Fred H. Albee**

#### **Pioneering Orthopedist**

**T**HE mending of crippled and distorted bodies, whether of children (as suggested in the Greek etymology of the word, orthopedist) or adults, is a spectacular and rewarding branch of surgery, and this country has furnished several notable workers in this line, among whom Dr. Fred Albee stands high.

Born in Alna, Maine, in 1876, Albee received his B.A. degree from Bowdoin College, in 1899; his Doctorate in Medicine from Harvard University Medical School, in 1903; his Sc.D. from the University of Vermont, in 1916; and his LL.D. from Colby College in 1930.

He entered the specialized field of orthopedics sufficiently early in his career, so that, in 1914, he demonstrated his methods of bone grafting before the German Surgical Congress, in Berlin, and these methods were immediately adopted by the German army. His invention of the electrically-driven bone saw permitted him to mold bone to any size and shape necessary to secure perfect anatomic adjustment of his autogenous grafts.

In 1916, the French Government invited him to demonstrate his methods in various military hospitals. After six months of this he returned to the United States and was immediately appointed a member of the Advisory Orthopedic Council to the Surgeon General, opened two field hospitals, and then started his greatest piece of work at the big

general hospital for reconstruction work, at Colonia, N. J., where in one year, more than 2,000 patients were treated, immediately upon debarkation.

Albee then developed the Curative Workshop, in New York City, where, under industrial conditions, the handicapped men were enabled to work their way back to more or less complete physical and mental normality.

Dr. Albee is a physically and intellectually sturdy individual—a world citizen, whose work has been substantially and officially recognized in a score of different countries, by honorary degrees and appointments and by decorations. His fund of energy and enthusiasm is enormous, as is shown by the fact that he is active in a number of professional societies, here and abroad, including the American College of Surgeons, and is on the consulting staffs of 25 or 30 hospitals. He also holds a colonel's commission in the Medical Reserve Corps, U. S. Army.

He was formerly professor of orthopedic surgery in the New York Postgraduate Hospital of Columbia University, and a member of the faculty of the International Clinics, Paris, France.

Besides his unique contributions to the science of bone grafting, and other orthopedic surgical procedures, including a number of instruments and pieces of apparatus (such as the Albee fracture table), he is the author of at least two books, "Bone

Graft Surgery" (1915) and "Orthopedic and Reconstruction Surgery" (1919), and of many important articles in medical journals, and is still carrying on.

Genius is the eagerness and ambition of youth, plus the skill and wisdom usually acquired only with age.—ROBERT QUILLLEN.

### Old Desires

NEARLY eight hundred years ago, there lived and loved, in Persia, a poet and philosopher named Omar. He was highly regarded as an astronomer and mathematician, in his day, but that side of his activities has been largely lost in the mists of the years and the rush of modern progress. He lives for us, today, as vitally as he lived for his contemporaries of the eleventh and twelfth centuries, because of an avocation and emotional outlet which he cultivated by the writing of something like 5,000 quatrains (called, in the Persian tongue, *rubáiyát*, in which he set forth his amatory and bibulous adventures and much of his philosophy, just as the impulse struck him. (When he wrote thus he adopted, like many moderns, a *tak-hallus* or *nom de plume*, derived from his early labors as a tentmaker, calling himself, Omar Khayyám.

One of these *rubáiyát*, as translated, in 1859, by Edward Fitzgerald, begins with the lines:

"Now the New Year, reviving old desires,  
The thoughtful soul to solitude retires."

and therein gives us, not merely a statement of what was, presumably, his own practice, but a maxim worthy of being acted upon by all thoughtful men of all ages, and particularly applicable to this hurrying and preoccupied generation.

Much has been said and written about the advantages—nay, the necessity—for taking a periodic inventory of one's intellectual and spiritual accomplishments and acquisitions, from time to time, and likewise regarding the high values of an avocation, as means for the release of physical, emotional and mental energies not exercised in the winning of one's daily bread. But too little stress has been laid upon the equally pressing necessity

for occasional periods of pondering, in solitude, upon the years that lie before us, and the development of plans, whereby we may arrive at the satisfaction of our "old desires" which rise up, at times, to mock us with the fact that we are growing old in the pursuit of phantasms which have no power to bring us that happiness which is the only rational aim of human existence.

Omar suggested the New Year, which really begins in the springtime, whatever the calendar may say, as a time when the "old desires" were most likely to be revived, and recommended this as a favorable time for retirement into solitude, for the purpose of devising schemes for their realization.

Every man has, hidden down in the deeps of

him, more or fewer of these unexpressed and, frequently, ill-formulated strivings and aspirations — half-forgotten dreams of childhood; grandiose phantasies of adolescence; and the ripper, but furtively cherished, projects of his maturer years, to which he purposes to attend "when he has more time."

Beautiful, worthy, glorious "Castles in Spain"! Buried under an avalanche of petty, routine duties, inconsequential contacts, and the pressing propinquity of men and women who do not count! Mortgaged to buy the toys which thoughtless ones have exalted to be the emblems of material success! Lost for the lack of a little solitude and of

#### NEXT MONTH

Dr. Abner I. Weisman, of New York City, will report the results of the oral use of Stilboestrol in correcting severe deficiency of the female sex hormone.

Dr. G. M. Russell, of Billings, Mont., will present a simple and effective method for the treatment of gonorrhea by the general clinician.

#### COMING SOON

"Obstetric Mortality and a New Delivery Forceps," by F. A. LaBreck, M.D., Eau Claire, Wis.

"The Injection Treatment of Pain," by R. L. Gorrell, M.D., Clarion, Ia.

sinews of the soul!

If we would stop a while, in our feverish race after things which do not seriously matter, and devote a few hours or days,

"Where the 'White hand of Moses' on  
the bough

Puts forth, and Jesus from the ground  
suspends."

to a survey of the road ahead, we would be much less apt to come to the end of the period before us, finding our mouths full of sawdust and ashes, and much more likely to finish this day in the long curriculum of human experience (which we call a lifetime) with the conviction that the effort expended has been productive of adequate results, and that we have added, if only a little, to the world's stock of the solid and enduring verities, as well as to our own.





## The Bite of the Black Widow Spider

By

A. H. Voss, M.D., Odem, Texas

Black widow spiders have been reported in all states but seven, so almost any general clinician is apt to see cases of arachnidism and should keep it in mind. Dr. Voss suggests a method for treating these alarming cases successfully.

AS yet, little mention is made in textbooks about the bite of the black widow spider, (*Latrodectus mactans*), and apparently the greater infestation of certain regions has resulted in a tendency toward emphasis, in the literature from those sections, while there is a scarcity of reports from those areas where the spider has not been so common.

Spiders of the genus *Latrodectus* appear to have world-wide distribution, and are universally feared because of their poisonous bite. They are known to occur in Europe, Australia, North and South America, and Africa. Prior to about 1934, it was thought that their occurrence was more or less limited to approximately the southern half of the United States, but D'Amour<sup>1</sup>, in 1936, found reports of the spider in all states except Oregon, Minnesota, Iowa, Missouri, Wisconsin, Illinois, and Vermont. It is probable that no section of the country is entirely free from this arachnid.

Vail<sup>2</sup> points out that the symptoms following the bite of a black widow spider may vary widely, depending on the location of the bite and the amount of toxin introduced but, as a whole, they tend to follow the same general course and are usually severe, frequently alarming, and many times misleading, unless one has the possibility of spider bite in mind.

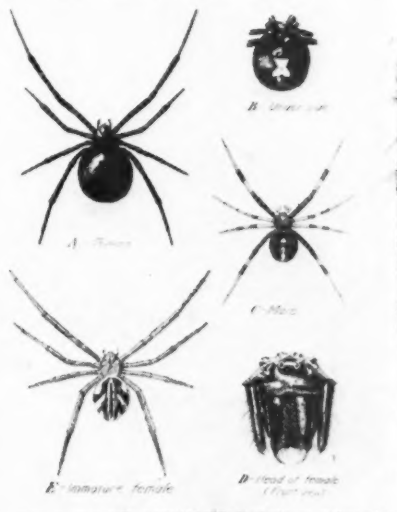
Patients may or may not realize that they have been bitten. When the bite is felt it may appear insignificant, being momentarily a sharp, stinging pain, much the same as that produced by a needle prick. Examination of the bite may reveal a small red spot, pin-point in size, which is not elevated and which usually disappears within four hours. It is equally possible, however, that no evidence of the bite will be seen.

Within from fifteen minutes to several hours the systemic symptoms begin to appear, the location of the bite determining this to some extent. If the bite is located on the genitalia or buttock, the onset is marked by severe, sharp, stinging pains in the lower back and sacral region; if on the lower extremity, the same symptoms are felt, first in the extremity, gradually extending to the back and sacral region.

If the patient is able to walk, a characteristic gait will be noticed: He is usually bent forward with the hands held against the abdomen, and the legs are moved slowly and with difficulty. Pain becomes more severe, spreads to the lower abdomen, and becomes more intense, and the patient is restless. The pain finally extends over the entire abdomen and at times involves the chest and precordium to some extent; spreads to the legs; and becomes excruciating, so that the patient writhes and tosses in bed, exhibits great thirst and anxiety, and respiration becomes rapid and shallow. Dyspnea may be marked. Perspiration is profuse. The abdomen presents a board-like rigidity such as that seen in acute surgical conditions of the abdomen, but presents no localized area of tenderness. There is headache, and the pain in the back may extend up the neck.

Drake<sup>3</sup> mentions the possibility that arachnidism may be mistaken for an acute abdominal disease, and discusses points in the differential diagnosis. Hagan<sup>4</sup> reports one case which showed many of the features of ruptured gastric ulcer, and was actually prepared for operation, when edema and redness of the eyelids, and swelling about the mouth were discovered. Ginsburg<sup>5</sup> calls attention to the importance of a correct diagnosis, to avoid unnecessary surgery, and points out that, while spider bites are most likely to be confused with ruptured gastric or duodenal ulcer, they may also closely simulate lobar pneumonia, angina pectoris, coronary thrombosis, renal colic, enteritis, acute appendicitis, volvulus, acute pancreatitis, food poisoning, and many other disease entities. Walsh and Hargis<sup>6</sup> report 12 cases

THE "BLACK WIDOW" SPIDER



© Keystone View Co.

Fig. 1.—(A) Female; (B) Under Side; (C) Male; (D) Head of Female (Front View); (E) Immature Female.

and stress the similarity of the symptoms to those of major surgical conditions.

In spite of the potency of the venom of the black widow spider, most patients recover. Bogen<sup>1</sup> gives the mortality as five percent, and Drake<sup>3</sup> points out that the patients generally are out of danger in two or three days. Ginsburg<sup>4</sup> found an average of 37 hours of hospitalization; but following recovery from the bite it is not uncommon for residual symptoms to be noted, in the form of numbness, tingling, general weakness, and transient muscle spasm, the last-named being the most troublesome. These may persist for weeks or sometimes months.

My results have varied, but have been interesting and instructive:

### Case Reports

**Case No. 1:**—The patient, seen at midnight, a white man about 60 years old, was in bed, prostrated, with pain in his abdomen and back, in the kidney region, and generalized aching all over the body, especially in the legs. His feet were cold; he was in a cold sweat; his pulse was rapid; and his abdomen rigid. The first impression was that of a ruptured peptic ulcer, but he told me of being bitten on the penis by a spider about 7 P.M. and described it as being a black widow. No evidence of the bite was visible.

I treated him with morphine, hot fomentations to the abdomen, hot-water bottles to his back and feet, and covered him well with blankets. I did not give him magnesium sulfate intravenously, because his blood pressure was 110/60, and I was afraid to lower it more, but gave it by mouth. After several small doses of morphine and atropine he was relieved somewhat. I saw him next morning, when he was feeling better, but still ached all over. I gave him codeine and Acetidine (acetphenetidine, acetosal, and caffeine) every four hours. There were no signs of cardiac failure nor nephritis (urine always normal). This man suffered for about four weeks with his back.

**Case No. 2:**—A Mexican woman, 28 years old, was bitten on the left thigh near the left labium, three hours before being brought to my office. She had severe abdominal pain; the abdomen was rigid (greatest being below the umbilicus); was in a cold sweat; and the pulse was moderately fast.

I gave her 10 cc. of Glucosan (a calcium preparation), intravenously, and before half of it was injected she was easy; but in 5 minutes after the complete injection she had the same pain again, so I gave 10 cc. more, after which she was easy for about 10 minutes, and I let her go home. In half an hour she had the same pain again, and I gave her codeine, atropine, and Acetidine tablets, which did no good. I never heard from her again.

Two more similar cases (Nos. 3 and 4) were treated along the same lines, with equally unsatisfactory results.

**Case No. 5:**—A Mexican man, 29 years old, while working on a tractor, was bitten over the left mandible, near the point of the chin, and came to my office about 10 minutes after the bite. This being such a short interval, I decided to use the electric suction pump on him.

I made a small crucial incision at the site where he said he was bitten (there was no redness nor indication of any kind), and over it I placed a suction cup and ran the machine for an hour.

While this was going on I gave him 20 cc. of 10-percent magnesium sulfate solution, intravenously, and  $\frac{1}{4}$  gr. (16 mg.) of morphine, hypodermically.

He felt well at the end of this treatment, and started to leave the office, but as soon as he got up he fainted. On recovery he was in a profuse cold sweat, so I put him to bed in the office. He became nauseated in about an hour and vomited, and a severe headache developed, which was not relieved by any of the ordinary remedies, even when  $\frac{1}{2}$  grain (32 mg.) of codeine was added. He did not have the usual abdominal symptoms, and the nausea and vomiting were probably due to the morphine. He did not have any respiratory symptoms, as I was afraid that he would have, because the bite was so close to his brain and medulla.

About 5 P.M. he was in fairly good condition, except for weakness and headache, so I sent him home with a prescription for Aspirin (acetosal) and codeine. The next day he said that he had slept fitfully, but his head ached all night, and in the early morning his back had felt as if it would break if he moved it. This backache cleared up, in about three days, so that he could be up and about, but he was not able to go to work for a week after the bite.

**Case No. 6:**—This patient was a small white man, 58 years old, who came to the office about 30 minutes after he had been bitten on the back of his right shoulder by a black widow spider.

I incised the tiny reddened spot on his shoulder, applied the suction machine for an hour, gave him a prescription for codeine and Acetidine tablets, and told him to go home and take a big dose of epsom salts.

He did this, and came back about 3 hours later, stating that he had no pain, but that he didn't feel right. I looked him over carefully and could find nothing wrong. His pulse, temperature, and respiration were normal.

About midnight he sent word that he had a terrible cramping in his stomach, and that the salts had not acted. I told him to take a hot soapuds enema and put a hot-water bottle to his stomach, and if that did not relieve him to come to my office. About 2:00 A.M. he came in, with severe pain and a board-like, rigid abdomen, and in a cold sweat. I gave him 20 cc. of 10-percent magnesium sulfate solution, intravenously, and  $\frac{1}{4}$  gr. (16 mg.) of morphine, immediately. This seemed to relieve him, and in about 5 minutes he appeared to be drunk, so I sent him home to bed, where he immediately went to sleep. Next morning he awakened with a severe backache, which persisted for more than a week.

Finlayson<sup>5</sup> summarizes the results of 18 cases of spider bite treated with a specific serum or antivenin, administered subcutaneously in 16 cases, and in 2 cases intravenously, with no ill effects. It appears that the intravenous route is to be preferred in serious cases, but all the patients recovered. In 7 patients, morphine and atropine were injected in addition to the serum, but 11 patients were treated with serum alone. Several patients were in a state of collapse when the serum was injected, but recovered within twenty-four hours after its administration.

A new product, Lyovac Antivenin (*Latrodectus mactans*), made available by the Mulford Biological Laboratories of Sharp & Dohme, is supplied in the lyophilized form (dehydrated serum under vacuum), which assures therapeutic efficiency for at



least five years.<sup>9</sup> The recommended treatment is the injection of 2.5 cc. of the serum, as soon as the clinical picture or history indicates that a bite has been received from the black widow spider. Each dose contains the equivalent, in neutralizing power, of the venom of at least 750 spiders.

**Case No. 7:**—A white woman, about 36 years old, came to me about 7:30 P.M., stating that she was bitten on the right buttock, by a black widow spider, about 30 minutes previously, and that she had begun to ache in the right groin. There was faint redness about the site of the bite. After testing her for allergy, I gave her an ampule of Antivenin (*Latrodectus mactans*) in the hip, and had her lie quiet on the table. In 5 minutes she said that the pain was beginning to subside, and in 15 minutes she said that there was no more pain, so I let her go home. She had a good night's sleep; the next morning she felt as usual; and has had no unpleasant symptoms since.

**Case No. 8:**—A Mexican man, 31 years old, was seen in the office at 1:30 P.M. and stated that, two hours previously, while cleaning an old vacant house, he had been bitten by a black widow spider, which he described adequately. The lesion was on the anterior aspect of the right thigh, about midway between the knee and hip, and looked as if a hair might have been pulled from it. There was no redness about the site. He came to me because of pain in the right inguinal region, and because he had seen a victim suffer from the effects of a black widow bite.

After testing him for sensitivity, I gave him an ampule of Antivenin. In 15 minutes he said that all of his discomfort had gone. I learned later that, after he had eaten supper, he had a bad stomachache which caused him to vomit, and after vomiting he was relieved. Knowing the Mexican diet, I think that this stomachache was

due to something he ate, instead of to the spider bite, as he had no more symptoms.

### Summary

In reporting these cases, I have described the various forms of treatment and have tried to show that the results of treatment with calcium and magnesium sulfate, which we have used in the past as the only drugs that have given any degree of relief, are decidedly unsatisfactory.

I have treated only two cases with the Antivenin, but those are the only two in which the results have been pleasing.

If this treatment can be used before the severe and painful symptoms occur, they will be prevented. That, I think, makes Antivenin the ideal treatment for black widow spider bite.

Since using antivenin in the two cases here reported, I have treated three more cases by the same method, with equally satisfactory results.

### References

- 1.—D'Amour, F. E.: Comparative Assay of Black Widow Antisera. *Proc. Soc. Exper. Biol. & Med.*, 35:262, Nov., 1936.
- 2.—Vail, A. D.: Black Widow Spider Bite; Report of 2 Cases. *J. Mo. M. A.*, 36: 330, Aug., 1939.
- 3.—Drake, J. C.: Arachnidism, "Black Widow Spider." *CLIN. MED. & SURG.*, 44:298, July, 1937.
- 4.—Hagan, H.: Arachnidism (Spider Poisoning). *Ky. M. J.*, 36:120, March, 1938.
- 5.—Ginsburg, H. M.: Black Widow Spider Bite; Report of 44 Cases. *Calif. & West. Med.*, 46:381, June, 1937.
- 6.—Walsh, G., and Hargis, A.S.: Arachnidism; Report of Series of 12 Cases. *South. Med. & Surg.*, 97:673, Dec., 1935.
- 7.—Bogen, E., and Loomis, R. N.: Poisoning Poisonous Spiders; Experimental Investigation in Control of Black Widow Spider. *Calif. & West. Med.*, 45:31, July, 1936.
- 8.—Finlayson, M. H.: "Knoppi-Spider" Bite. *South African M. J.*, 10:43, Jan. 25, 1936.
- 9.—Black Widow Spider Antivenin. *Med. World*, 57: 669, Oct., 1939.

## Interpretation of Abdominal Pain

By

I. S. TROSTLER, M.D., F.A.C.R., F.A.C.P., D.A.B.R., Chicago, Ill.

**ABDOMINAL** pain is one of the most frequent complaints of our patients, consequently the interpretation of such pain is a highly important item in our daily practice.

The conditions which cause 95 percent of pains in the abdomen are either inflammation, ulceration, or neoplastic formations, if abnormalities in the abdominal wall are ruled out.

Beginning at the upper part of the abdomen: Esophageal disease usually causes pain early, unless it is due to a neoplasm.

Gastric disease usually produces epigastric pain, generally in the median line but sometimes referred to the right or left. When this pain appears soon after eating, it is liable to be due to inflammatory disease.

No group of diseases of the digestive tract present the same degree of periodicity as does gastric ulcer. Relation to food intake, or the lack of such relation often points out a diagnosis, other things, such as age, etc., of course being important factors.

Among the less frequent causes of epigastric

pain are pancreatic disease, tabes, gastric neuroses, allergic disease, splenic diseases, postoperative hernia, umbilical hernia, diverticulitis (particularly of the duodenum or jejunum), plumbism, retroperitoneal tumors, adhesions, tuberculosis of some of the abdominal organs, intra-abdominal cold abscess of Pott's disease, rheumatic fever, and others, in adults. In children, the onset of measles and other exanthems is frequently the cause of abdominal pain. Rarely, herpes zoster will give rise to misleading abdominal pain, before the herpetic rash appears.

About one-half (49 percent) of all men over thirty years old, who complain of abdominal pain, have organic disease, such as peptic ulcer, gall-bladder disease, or some abdominal malignant condition. This figure is only 38 percent in women of the same age.

I have found that tabulation often presents a picture that materially aids in clearing up and differentiating diagnostic points, and therefore offer the following chart:

## DIFFERENTIAL DIAGNOSIS OF ABDOMINAL PAIN

|                          |  |  |
|--------------------------|--|--|
| TIME<br>OF<br>OCCURRENCE | Constant and continuous  | Gastric, hepatic, or pancreatic cancer, if the patient is more than thirty years old.                                  |
|                          | During deglutition   | Esophagus. Cancer if the patient is more than 30 years old.  |
|                          | After eating—a few minutes<br>1 to 3 hours<br>2 to 4 hours<br>3 to 6 hours | Gastritis (occurs mostly in men).<br>Gastric ulcer.<br>Duodenal ulcer.<br>Gallbladder, hepatic, or pancreatic disease. |
|                          | During defecation<br>(usually a dull ache)                                 | Colonic disease; malignant if the patient is more than 35 years old.   |
|                          | During micturition   | Renal or ureteral stone, pyelitis, etc.  |
|                          | No time relation;<br>pain sharp and knife-like                             | Tabetic crises.  |
|                          | "Just a belly-ache"  | Gastric neuroses.  |
| ONSET                    | Sudden and/or tearing  | Gallstones or renal stones.  |
|                          | Gradual, with vomiting   | Appendix disease.  |
|                          | Sharp and boring,<br>relieved suddenly and completely                      | Perforation of ulcer; rupture of a viscus or an abscess.   |
| DURATION                 | Constant   | Cancer; gallbladder or pancreas.   |
|                          | Brief and stabbing   | Tabetic crises.  |
|                          | Until food is taken  | Peptic ulcer.  |
|                          | Until stomach is empty   | Gastric carcinoma or gastritis.  |
| LOCATION                 | Right shoulder   | Gallbladder, hepatitis, pneumothorax.  |
|                          | Epigastrium  | Gastric disease, hepatitis, duodenitis, duodenal or jejunal diverticulitis.  |
|                          | Hypogastrium   | Small intestine, intussusception.  |
|                          | Right hypochondrium  | Gallbladder or hepatic disease.  |
|                          | Left hypochondrium   | Spleen, splenic leukemia.  |
|                          | Right iliac region   | Appendix disease.  |
|                          | Upward toward R. Shoulder  | Gallbladder disease.   |
| DIRECTION<br>REFERRED    | To right or left   | Gastric disease.   |
|                          | Backward   | Pancreatic or gastric disease.   |
|                          | Toward umbilicus   | Appendix disease.  |
|                          | Downward to R. thigh   | Appendix disease.  |
|                          | Downward to testes or labia  | Renal or ureteral stone.   |
|                          | Downward to head of penis  | Ureteral stone.  |
|                          | Eating   | Peptic ulcer.  |
| RELIEVED<br>BY           | Hunger or empty stomach  | Gastric cancer; gallbladder disease.   |
|                          | Vomiting   | Gastritis or gastric tumor.  |
|                          | Belching   | Gallbladder disease or gastritis.  |
|                          | Posture: R. leg flexed<br>Lying on R. side<br>Lying on L. side             | Appendix disease.<br>Appendix disease or right renal stone.<br>Left renal or ureteral stone.                           |

# Difficulties in the Interpretation of Bone Roentgenograms

## Part II\*

By

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### NORMAL BONE, VARIETIES OF DEVELOPMENT, AND PATHOLOGIC PROCESSES

#### Attachment on Bone

THE attachments of muscles (tendons), ligaments, and interosseous membranes are more readily visualized on the roentgenogram as their function increases, so it is easier to differentiate these regions as roughnesses on the bone in strong men than in delicate women. There are, however,

These are, however, the normal rib margins, corresponding to the intercostal crests.

On the inferior surface of the lateral portion of the clavicle, an irregular prominence is seen which may suggest periostitis ossificans or an old callus (Fig. 17). This is the insertion of the coracoclavicular ligament and is of no clinical importance. Anatomic experience, and comparison with the opposite side, will prevent an error in diagnosis.

#### Calcification of Arteries

The walls of arteries containing calcium deposits (a sign of arteriosclerosis) are distinctly visualized on a roentgenogram and, as a rule, such calcifications are readily recognized, but when they are projected into the margins of bones (Fig. 18), they give an appearance resembling that of periostitis ossificans. It is difficult to mistake these vascular calcifications for anything else, except when they are projected into the margin of a bone. Two roentgenograms, made from different angles, will provide the differential diagnosis in doubtful cases.

#### Compact Osseous Islands

Islands of compact bone are frequently seen within the cancellous structure of the long bones. They occur as distinctly outlined, small, oblong shadows and may simulate a pathologic formation. Within the larger bones, such as the head of the humerus (Fig. 19), they are usually larger, while in the smaller bones their size is proportionately smaller.

They are situated at the junction of the cancellous trajectories and are nearly always observed incidentally, having no clinical significance. Their characteristic shadow on the roentgenogram, and their appearance near the ends of bones, generally prevent misinterpretation.

#### Irregular Epiphyseal Lines

The edges of the epiphyseal lines are never straight and regular. If the epiphyseal plate is outlined by bone on both sides, it appears on the roentgenogram, as a band of light. Before the development of an osseous center of an epiphysis, the roentgenogram indicates only one side of the epiphyseal plate, and it may have an irregular appearance, simulating a pathologic process. We notice this sign in the lateral view of the calcaneus (Fig. 20), before the apophysis ossifies. This wavy and indented outline can easily be misinterpreted as a pathologic alteration.

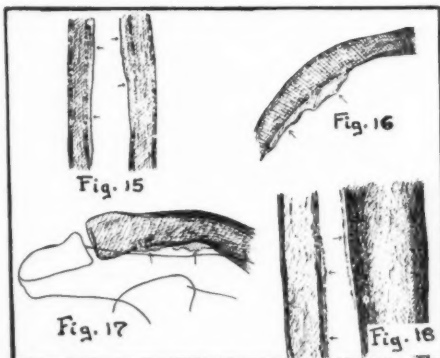


Fig. 15:—The interosseous crest of the radius and ulna may simulate periostitis ossificans.

Fig. 16:—The inferior edge of a rib frequently simulates periostitis or callus formation.

Fig. 17:—The attachment of the coraco-clavicular ligament on the clavicle may suggest a pathologic change.

Fig. 18:—Calcified arteries, projected into margins of bones, are similar to periostitis ossificans.

even in the delicate skeleton, special regions, such as the forearm, rib, and clavicle, where the muscles produce an irregularity on the bone-surface.

In the forearm we find a fine shadow, following the adjacent margins of the radius and ulna, as a demarcation of the interosseous space (Fig. 15). This shadow may simulate periostitis ossificans, but the finding is a normal one and represents the interosseal crest, which on the shaft of the radius, serves as an attachment for the interosseous membrane, and the more curved the radial shaft, the more prominent is the crest.

The middle ribs may present confusing shadows (Fig. 16). The lower border shows a long, superimposed shadow with a definite margin, which may simulate periostitis ossificans or a callus formation.

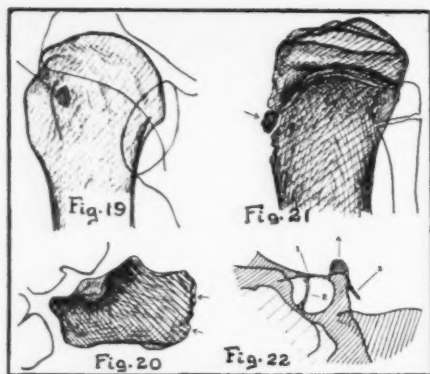


Fig. 19:—A compact island of bone in the proximal extremity of the humerus is without clinical significance.

Fig. 20:—Irregularity of the posterior margin of the calcaneus, in a child, is entirely normal.

Fig. 21:—Irregular calcification of the proximal epiphysis of the tibia may simulate Osgood-Schlatter's disease.

Fig. 22:—Variations of the sella turcica. (1) Lime deposit of the interclinoid ligament (interclinoid bridge); (2) Calcified ligamentum carotico-clinoideum; (3) Calcified plica petro-clinoidea medialis; (4) Dorsum sellae elongatum.

The apophysis of the calcaneus may also be another source of error, when it appears greatly increased in density; but the irregular borderline of the posterior contour, and the condensation of the apophysis, are normal findings.

The anterior part of the upper epiphysis of the tibia hangs in front of the diaphysis, and later forms the tubercle of the bone. The calcification of this tongue-like process may present variations, even on both sides of the same individual. Furthermore, a separated bone nucleus may appear, and thus the whole area suggests a pathologic process (Fig. 21). Such an appearance may readily simulate Osgood-Schlatter's disease.

The differential diagnosis between these entirely normal osseous conditions, and pathological processes, is determined by:

- 1.—Comparison with the opposite side.
- 2.—Comparison with roentgenograms of the same region in other individuals of similar age.
- 3.—Clinical evidence.
- 4.—Repetition of the x-ray examination a few months later.

#### Variations in the Sella Turcica

There is frequently seen, in individuals who have never had any symptoms pertaining to the sella turcica region, evidence of calcification of the so-called ligaments of the dura mater, which are formed by reduplication of the dura where it crosses over the bony processes (Fig. 22), and may be classified as:

- 1.—Calcifications of the interclinoid ligament, connecting the anterior and posterior clinoid processes (interclinoid bridge).
- 2.—Calcification between the anterior clinoid process and the accessory middle clinoid process. This ligament outlines a foramen for the internal carotid artery from behind, and is therefore called the ligamentum carotico-clinoideum.
- 3.—A calcium deposit in the so-called plica petro-clinoidea medialis, which is the ligament connecting the posterior clinoid process and the dorsum sellae to the upper margin of the petrous portion of the temporal bone (pyramis). Usually this calci-

fication is noted only close to the dorsum sellae.

4.—On the dorsum sellae there is sometimes a building up of calcium, resulting in an elongation of this part, sometimes referred to as the "dorsum sellae elongatum."

All these conditions are normal and represent a variation in development. It has not yet been proved that a pathologic process or injury to the sella turcica region may produce changes in the sella such as those described. Because such calcifications of the dura ligaments are readily recognized on the skull roentgenogram, they may easily be interpreted as representing a pathologic change in this region.

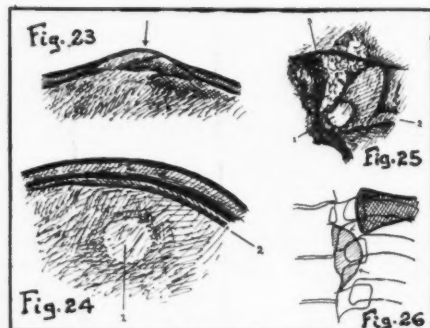


Fig. 23:—Marked prominence of the external surface of the skull, caused by a large pachionian depression—a sign of senility, without clinical importance.

Fig. 24:—A pachionian depression (1), situated more laterally from the longitudinal sinus (2) than normal—not pathologic.

Fig. 25:—(1) A deep jugular fossa may simulate a cholesteatoma. (2) Large mastoid emissary vein. (3) Upper margin of the pyramis.

Fig. 26:—The bony nucleus of the manubrium sterni may simulate an enlarged lymph node.

#### Depressions of the Skull

The wall of the calvarium is often greatly diminished in thickness, due to the pachionian depressions, which are usually situated on the parietal bone near the groove for the superior sagittal sinus. In the skulls of old people, a pachionian depression may be deep and produce a prominence on the external surface of the skull. In some instances this elevation is so marked (Fig. 23) that it simulates a pathologic process producing a partial destruction of the parietal bone.

If such a depression is not localized close to the mid-line of the skull, and appears as a solitary area (Fig. 24) of distinctly circumscribed clearness, it closely resembles a localized osseous destruction, suggesting a gumma or myeloma.

The jugular fossa of the temporal bone varies in depth and size in different skulls, sometimes being so deep that the whole thickness of the bone appears impressed. This indentation is seen in the roentgenogram (Fig. 25) as a distinctly contoured, benign destruction, simulating a cholesteatoma.

The typical location for the pachionian depression, its distinct and smooth outline, and complete lack of change in the contiguous bone will usually identify this formation as a normal osseous change or a variation in development.

The deep jugular fossa is usually as readily recognized, because of its sharply outlined and dense border, its anatomic location, and sometimes, but not always, by a comparison with the opposite side

of the skull. Usually a deep jugular fossa is accompanied by a wide mastoid emissary vein.

### Bone-nucleus of the Sternum

If the posterior-anterior roentgenogram of a child's chest is not made entirely symmetrically, or if the thorax shows an asymmetrical shape, a distinctly bordered, faint shadow (Fig. 26) is shown close to the mediastinum and just below the inter-

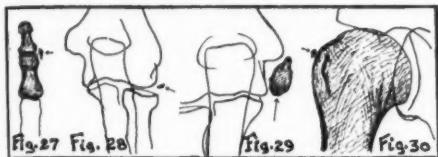


Fig. 27:—A para-articular calcification may suggest a chip-fracture.

Fig. 28:—A small para-articular lime deposit in the elbow can easily suggest a chip-fracture.

Fig. 29:—A large bony deposit close to a joint can hardly suggest fracture fragment.

Fig. 30:—A bursoloth in the shoulder region frequently looks like a chip-fracture.

clavicular level. The projection of this shadow upon the lateral wall of the trachea may give the impression that an enlarged paratracheal lymph gland is present.

This shadow, however, corresponds with the bony nucleus of the manubrium of the sternum, and represents an entirely normal finding. A recheck examination, in a slightly different position of the patient, will immediately clarify the diagnosis; also the location of the faint shadow, close to the medial end of the clavicle, facilitates the correct diagnosis.

### PATHOLOGIC AND TRAUMATIC BONY CONDITIONS

#### Para-articular Lime Deposits

A solitary pathologic or post-traumatic calcification in the para-articular tissues may occasionally be difficult to distinguish from a chip-fracture.

A lime deposit in the immediate neighborhood of a joint is commonly the result of a post-traumatic hematoma, and its shape takes the character of the soft tissues in which the hematoma arises. Usually it is spindle-shaped, with the long axis perpendicular to the joint space (Fig. 27). It is relatively far from the joint because it develops within the fibrous stratum of the articular capsular ligament or outside of it. A hematoma may also form a cavity within the tissues next to a joint, in which case the calcification will appear somewhat round in form.

The calcifications or bony formations of the elbow region are usually seen on the lateral side at the level of the joint space, or on the medial side within the groove for the ulnar nerve. As they are sometimes seen as elongated shadows (Fig. 28), they may easily be thought to be chip-fractures.

A chip of bone is seen close to the joint, if it originates from a joint-body, and is usually situated intracapsularly. If it is a fragment derived from a bone outside of the articulation, the differentiation of a para-articular lime deposit from a chip fracture may be very difficult or impossible, especially if there is a history of injury.

If the shadow in the roentgenogram is of sufficient size (Fig. 29), the differentiation between a bony fragment and a calcification is simple, as a big fragment must be accompanied by the absence of a corresponding part of the bone from which it came.

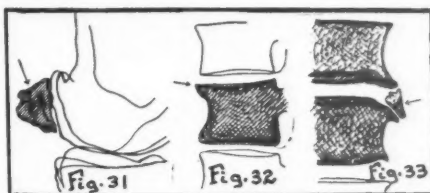


Fig. 31:—A deformed "fabella" of the knee region may simulate a broken off osteophyte.

Fig. 32:—In a lateral view of the lumbar spine, a solitary osteophyte may simulate a compression fracture.

Fig. 33:—A paravertebral calcification in spondylitis deformans may simulate a fractured osteophyte.

### Bursololiths of the Shoulder Joint

The clinical significance of a small calcified shadow near the proximal end of the humerus is sometimes difficult to evaluate (Fig. 30). It is known that detachments and separations of small osseous fragments from the greater tuberosity of the humerus are quite common. As a rule they are recognized by their form and location, although the loss of bony substance from the humerus cannot be recognized unless the fragment is of considerable size. It is also well known that a lime deposit frequently occurs in the subacromial or subdeltoid bursa (bursololith).

These bursololiths are the results of peri-arthritis, and are sometimes multiple and symmetrically developed on both sides. Their form is usually irregular, their shadow cloudy. Occasionally they show the same morphologic signs as those of a fractured bony fragment, when it is better to rely on the clinical history, and even then a correct diagnosis may be impossible.

### Pathologic Sesamoid Bones

Sesamoid bones frequently participate in the pathologic changes of an adjacent joint. In chronic joint lesions, especially chronic osteo-arthritis deformans, the neighboring sesamoids are more or less markedly deformed. In some instances it is necessary to consider, in establishing a differential diagnosis, a free bony body; a calcified plaque in an articular capsule; calcification of the soft tissues following trauma; and especially a detachment of a bony fragment.

The sesamoid bone so commonly seen in the lateral tendon of the gastrocnemius muscle, the fabella, is readily recognized if it is distinct in outline and regular in shape. An enlarged and malformed fabella (Fig. 31), however, may almost touch the posterior surface of the lateral condyle of the femur, and may be separated from it only by a narrow, irregular space, when it may be confused with a fracture of a large osteophyte of the femur.

The presence of osteoarthritis of the knee joint may readily explain such a deformed fabella; but the more intense the arthritic signs are in the knee, the more probable is the supposition of a fractured osteophyte.

### Spondylo-arthritis

With advancing age, the edges of the vertebral bodies become sharper and show signs of spondylo-arthritis deformans. This is such a relatively common observation that it is no longer considered pathologic in later life, but only a sign of advancing years. In some instances the sharpened borderlines of the vertebral bodies may result in difficulties in



interpretation, especially if there is a question of vertebral fracture.

Spondylo-arthritis deformans may also change the form of the vertebral body, as the anterior height of the body is usually less than the corresponding posterior portion. This is generally readily recognized in the lateral view (Fig. 32).

Almost the same type of change in the shape of the vertebral body is seen in a recent compression fracture. The resemblance between these two entirely different conditions is further emphasized by the fact that an accompanying exostosis may simulate a chipped fracture fragment. This important differential diagnosis may be very difficult. Sometimes it is facilitated by recognizing additional exostoses on the same spine, but these (osteophytes) are also subject to fracture.

Careful interpretation is necessary if we see a separation in a large osteophyte in hypertrophic spondylo-arthritis deformans (Fig. 33). It may

represent a para-vertebral soft tissue calcification, shown on the film like a fracture of an osteophyte. Frequently differential diagnosis is not possible.

### Summary

We have attempted to show the more common errors in the interpretation of roentgenograms of the osseous system, describing three groups:

- 1.—Errors of differential diagnosis between normal bone or varieties of development, and trauma.
- 2.—Errors of differential diagnosis between normal bone or varieties of development, and pathologic processes.
- 3.—Errors of differential diagnosis between pathologic and traumatic osseous processes.

An explanation as to how many of these errors may be avoided is also given.

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THE END

## Fascial Deficiencies in Military Service

By

H. I. BIEGELEISEN, M.D., New York City

Questions regarding physical disability for military service will be perplexing to physicians who have had limited experience in this line. Dr. Biegeleisen offers help in answering some of these questions.

**T**HIS paper deals with a group of conditions which are dependent upon deficient fascia for their presence. I therefore call them the fascial deficiencies, and have found a definite hereditary tendency in many families. One of these disabilities is often accompanied by others in the same group, so that varicose veins are frequently seen in conjunction with flat feet or hemorrhoids.

In view of the fact that most of these disorders are rare in animals,<sup>1</sup> it is fair to assume that the upright posture is in large measure responsible for their development. This is of special importance, from the military point of view, because of the aggravation to be expected in military life. The consideration of this group as a whole is of timely importance, especially in view of the new national defense program.

Discussion will be divided into the following headings:

- 1.—Varicose Veins and their complications.
- 2.—Hemorrhoids.
- 3.—Hernia.
- 4.—Hydrocele.
- 5.—Varicocele.

### Varicose Veins

The question of when the condition of varicosities on the lower extremities becomes a barrier to regular military activity has been a troublesome one. In general, patients with ordinary, uncomplicated cases can walk indefinitely without any difficulty, but standing for any length of time causes discomfort, because, in walking, muscular action propels the retarded venous blood at a more normal rate.

There is, in addition, the ever-present danger of dermatitis, phlebitis, and ulceration, which may occur after exposure to cold or trauma. Phlebitis or ulceration may cause disability lasting varying

periods of time, and the former may be further complicated by the development of a large leg, with hardening of the tissues, known as *lymph leg*, which may appear early, or years after the initial phlebotic infection. In extreme cases the leg will become so large as to resemble elephantiasis. Ulcerations occurring in these brawny, discolored limbs are the most obstinate types confronted by medical science. In severe cases, erosion of the subcutaneous tissues, and even gangrene, has been known to occur.

### Relation to Military Service

Men with mild cases of varicose veins can perform active military duty, in the absence of complications. With the injection treatment, or a combination of ligation and injection, these complications can be avoided. Severe cases (see Fig. 1) unfit men for ordinary military service, unless this treatment is instituted.

Complications such as dermatitis, phlebitis,<sup>2</sup> or ulceration can also be treated successfully by injections. If such complications develop in the course of military service, the injection treatment can afford rapid relief. The patients, in all of these procedures, remain ambulatory.

Lymph leg or lymphedema, with or without ulceration, is a progressive, chronic disorder which acts as a barrier to effective physical activity. Walking or standing causes swelling and discomfort. These legs lack resistance to climatic changes, and even the slight trauma of ordinary superficial lacerations may become badly infected ulcers. While some mild cases can be treated successfully<sup>3</sup> in a period of a few weeks, the great majority take months with injection methods, accompanied by physical therapy. With appropriate treatment, either conservative or operative, a fair number of these can be restored to *partial* physical activity (see Fig. 2).

Ulcerations occurring in lymph legs (see Fig. 3) are difficult to treat successfully and tend to chronicity and relapse. In general, these should be a cause for military exemption. Mild cases, when localized, are often cleared by injection and physical therapeutic methods, which will be described.





Fig. 1 (left):—Severe type of varicose veins, causing military disability. Fig. 2 (center):—Simple disabling "lymph-leg." Fig. 3 (right):—"Lymph-leg" with Ulceration: A disabling condition.

Unilateral enlargement may occur as a result of varicose veins, deep phlebitis, or central lymphedema. Superficial varicosities may cause enlargement of one leg, which will return to normal with injection treatment. Previous deep phlebitis may have caused an extensive deep collateral new growth of veins, thus causing permanent enlargement of the affected limb. These patients cannot be restored to normal, and should be exempt from military duty. They can be detected by a thorough history and an x-ray method which I developed a few years ago.<sup>4</sup> Cases of enlarged legs which result from lymphedema are also incurable and exempt. There is no known treatment to restore them to normal although symptoms can be relieved by treatment.

#### Malingering

Men with varicose veins may claim symptoms which are difficult to disprove. These cases should be relieved by the use of elastic stockings, elastic bandages, or sclerosing injections. Any claim of symptoms that persist in spite of these measures is not due to varicose veins. Ulcers and phlebitis, in the presence of varicose veins, are of a temporary disabling nature, and may be self-induced. They can be cleared up with appropriate therapy, as will be outlined presently.

#### Hemorrhoids

Prolapsed piles, which extrude spontaneously upon standing or walking, are definitely incapacitating. Those which prolapse only on defecation and return, spontaneously or with digital assistance, are "borderline" in their classification as disabilities. Injection treatment can quickly help many of these cases, rendering the patient useful from the military viewpoint.

Men with uncomplicated internal hemorrhoids, with or without bleeding, can be rendered physically fit with simple injection therapy. External hemorrhoids are usually of little consequence, except when thrombosed. In the latter instance spontaneous absorption usually takes place within two weeks and presents no further problem.

#### Malingering

The examiner should be on the lookout for *paraffinomas* in the region of the leg and rectum, as the injection of paraffin, to simulate varicose veins and piles, has been attempted.

But even after healing has taken place, an ordinary abrasion may cause the reappearance of another ulcer, which is progressively more difficult to heal with each attack.

#### Hernia

This frequent and troublesome condition, which shows a distinct hereditary pattern, will be divided,

for purposes of clarity, into the following groups:

- 1.—Enlarged rings or potential hernias.
- 2.—Beginning or concealed hernias (bubonocoeles).
- 3.—Definite hernias.
- 4.—Postoperative or recurring hernias.

The discussion that follows is based upon inguinal hernia; umbilical, femoral, and other types follow the same general pattern.

Enlarged rings (sometimes large enough to admit two or three fingers) indicate potential weakness in the inguinal region. This weakens the canal by the absence of the roof, which is formed by the fascia of the external oblique muscle. A study of a group of such cases, by industrial surgeons, has indicated that the percentage of hernias that develop later is larger than in a control series with normal rings. These rings can often be closed by suitably placed injections.

Bubonocoeles form a puzzling group, to most physicians, especially where the canal is too small to admit an examining finger. The symptoms of such a condition may be severe and may simulate other abdominal disorders, including kidney stone and appendicitis.

When the sac cannot be felt, diagnosis is difficult, but can be made by one or all of the following three methods:

1.—The location of an *abnormal* impulse in the inguinal region should be sought for. This must not be mistaken for the normal one, which is expansile. The distinction can be made only with experience.

2.—The use of a truss, which will relieve symptoms produced by a bubonocoele *only when it is worn*.

3.—By an x-ray study of the inguinal canal, which I recommended several years ago.<sup>5</sup>

The technic of demonstrating enlargement of the normal potential space in the inguinal canal is as follows:

After preliminary skin anesthesia with procaine or ethyl chloride, 5 cc. of Diodrast, in an ordinary syringe, is carried down to the aponeurosis of the external oblique muscle with a 3- or 4-inch, 20-gage needle, as in a routine hernia treatment. The point most suitable for injection is in the mid-canal region, where penetration of the aponeurosis and a thin layer of muscle beneath it will bring the needle point into the inguinal canal. In patients with large rings, the examining finger of the opposite hand can be carried into the canal and the needle actually felt as it is placed in position.

In this technic, the skin is penetrated  $1\frac{1}{2}$  inches above the midpoint of the canal, so that the needle lies parallel with the axis of the canal and is pointed downward and medially until the midpoint



Fig. 4.—Left bubonocoele with patient in supine position. Note shadow of Diodrast sharply outlined, with widening in upper half of the inguinal canal.

of the canal is reached and the aponeurosis is punctured. Following the injection of the Diodrast, a gauze sponge is strapped in place over the puncture and a roentgenogram immediately made in the supine position (see Fig. 4).

Definite hernias are, of course, apparent and can be treated by a truss, surgery, or the injection method.<sup>6</sup>

A properly fitting truss will render the sufferer physically fit, in many cases. Direct hernias are more difficult to hold and, unless expertly fitted, will slip out, especially in the squatting position. Injection therapy is especially valuable in rendering hard-to-fit cases easier to retain. Sliding hernias cannot be held by a truss and require surgery. Femoral hernias are frequently irreducible, and men who have them are then unfit for active duty.

#### Malingering

Claims of pain in the groin, due to large rings or incipient hernias (popularly called a "weakness" by the laity), call for skillful diagnosis. Relief of symptoms by the use of a truss, and other diagnostic measures just mentioned, will assist in the detection of malingerers. The examiner should be on the alert for cases of *self-induced* hernias. Reports have filtered through from Europe for many years, recounting the exploits of certain quacks who made a specialty of traumatizing the inguinal canal by manual manipulation.

#### Hydrocele

Small hydroceles, while in themselves not disabling, may become larger or be infected by trauma, and are therefore a bar to active duty. Injection treatment is so simple and efficient that it should be encouraged in all instances.<sup>7</sup>

#### Varicocele

Mild cases of varicocele present no problem except in neurotic individuals, where the symptoms are out of proportion. In extreme cases, the weight of the stagnant blood collection causes a dragging or even painful sensation. In severe cases, physical activity should be restricted until the condition is

corrected. Mild conditions, in well balanced individuals, will not interfere with military activity.

#### Treatment

The use of sclerotherapy in the fascial deficiencies mentioned has been successful in private practice. It compares favorably with surgery where time is a factor, because injections may be given daily. From a military point of view its use should be important, because it requires only one operator and does not take up hospital space, which is important in time of war, when hospital facilities become strained.

Uncomplicated varicose veins are treated by injection or a combination of ligation and injection, which will also take care of some varicose ulcers and skin complications and moderate cases of phlebitis and localized lymphedematous conditions. Larger areas of lymphatic stagnation, with or without ulcers, while they may be relieved by suitable treatment, can never be rendered non-disabling and are definite bars to active military duty.

Hemorrhoids without prolapse may be treated by operation, injection, or electrocoagulation. Operative treatment is prompt and definite, but injection treatment also offers relief in this group of cases. For military purposes, sclerosing injections may be given daily, treating a different segment of the rectum at each sitting. In this fashion the ordinary case may be cleared up in one week, which compares favorably with surgery for speed. Men with prolapsing piles are not suitable for military service. Considerable relief may be effected by injection, where surgery is not available or advisable. Thrombosed external piles often clear up spontaneously, and fissure of the rectum responds to injection therapy promptly, as a rule.

Hernias can be treated by a truss, operation, or injection. Enlarged rings should be closed by sclerosing procedures, thus removing a potential cause of hernia. Bubonocoeles, when found, can be treated by surgery or injection, with the latter procedure especially indicated. After a suitable truss has been fitted, injections may be given every day, so that in one or two weeks a full course of treatment has been completed. This ambulatory method is giving good results in skillful hands, and should be thought of by military surgeons when indicated.

Recurrent hernias, following unsuccessful operation, can also be treated by sclerosing methods, which are especially advisable where more than one operative procedure has been attempted. Finally, for those cases which are difficult to fit with a truss, injection procedures will often enable this appliance to be worn with comfort and success.

Hydroceles and varicoceles respond so definitely and simply to the injection method that it is preferable to surgery, in suitable cases.

#### Bibliography

- 1.—Personal communication from D. M. Campbell, Editor *Veterinary Medicine*.
- 2.—Biegeleisen, H. I.: The Treatment of Phlebitis in Varicose Veins. *Lancet*, April, 1936.
- 3.—Biegeleisen, H. I.: Lymphedema Occurring with Varicose Veins. *Arch. Dermat. & Syph.*, Vol. 33, pp. 689-696 (April, 1936).
- 4.—Biegeleisen, H. I.: Unilateral Enlargement of the Lower Extremity Accompanying Varicose Veins, With Roentgen Studies of "Deep Venous Block." *A. J. Roent. & Rad. Ther.*, Vol. XLII, No. 5 (Nov., 1939).
- 5.—Biegeleisen, H. I.: Two Fatty Acid Solutions for the Injection Treatment of Inguinal Hernia. *A. J. Surg.*, Vol. XXXVII, No. 3, pp. 413-417 (Sept., 1937).
- 6.—Rice, C. O.: "Injection Treatment of Hernia." F. A. Davis Co., 1937.
- 7.—Biederman, M.: Treatment of Hydrocele with Syllnasol. *Med. Rec.*, Jan., 1938.

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## The Seminar

Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussions of any or all problems. Discussions should reach this office by the 5th of the month following the appearance of the problem. Send your problems and discussions to The Seminar Dept. care CLINICAL MEDICINE, Waukegan, Ill.

### Problem No. 3 (Medical)

Presented by W. E. McKinley, M.D.,  
Jewell, Kans.

(See CLIN. MED., Mar., 1941, page 81)

**RECAPITULATION:** A frail, poorly developed white woman, age 46 years, mother of 3 children, who had always been delicate and had rheumatism and chronic malaria in her teens and pain in her left chest, off and on, for some time, was suffering with left purulent otitis media and sinusitis.

In February she developed dyspnea and orthopnea, with a cough and pinkish, frothy, seromucoid sputum. Her chest expansion was less on the left, her pulse rapid, and she was slightly cyanotic. One morning, the whole left side of her body was painful and swollen, but this passed off in 3 or 4 days.

She became more cyanotic, pale, and icteric and had a slight, macular eruption; remittent fever; a friction rub over the heart area; and slight edema of the feet.

On Mar. 20, there was purulent fluid in her right chest; moderate secondary anemia; leukocytes 14,000 to 28,000, with 80 to 85 percent polys; fever 101° to 103.5°F.; urine nearly normal.

Her chest was aspirated, and she had a hard chill, followed by high fever, repeated daily. On March 26 a rib was resected, but there was little discharge; chills and high fever occurred twice daily until April 2, when she died. No cultures or roentgenograms were made.

**Requirements:** Suggest the differential diagnosis, giving reasons, and a plan of treatment.

Discussion by L. E. Williams, M. D.,  
Kansas City, Mo.

The history and physical condition of this patient certainly cause one to think of tuberculosis, but the clinical course and the blood count study, showing 80 percent of polymorphonuclear leukocytes, are inconsistent with this disease. Although tuberculosis cannot be excluded, it is not the dominant condition. The fact that the pleural effusion was not bloody tends to rule out tumors.

Effusion of the pleura sometimes follows an attack of pneumonia, but in that case it usually is a sequella, coming on after the temperature has subsided, or it may be the cause of the delay in resolution. In pneumonia the temperature is usually higher, there is a more productive cough, and edema is absent. One is not justified in making a diagnosis of pneumonia from the history and physical findings, as presented in this case.

The history of rheumatism and the presence of focal infection suggest the possibility of sero-

fibrinous pleurisy, but the clinical course and the marked dyspnea, cyanosis, and edema, tend to rule out this condition.

The fact that rib resection failed to establish drainage leads one to suspect a lung abscess or an encysted abscess. As nothing is said of an offensive odor, the lung abscess may be disregarded, and as there was no x-ray study, an encysted abscess cannot be ruled out.

The history of rheumatism and frequent attacks of precordial pain, and the presence of a discharging ear and sinusitis, in an undernourished individual, with marked cyanosis, dyspnea, precordial pain, rapid pulse, and edema of the feet and left chest, with the apex beat in the axillary line of the fifth right interspace, suggest to me pericardial effusion.

While nothing is said of the duration of the deafness and the aural discharge, it is entirely possible that the patient had chronic mastoiditis, from which she developed septicemia. Of the three germs most often responsible for pleural effusion (pneumococci, tubercle bacilli, and streptococci), the streptococci are most fatal. Hence, I am inclined to think that, in this case, we are dealing with a streptococcal infection.

I take the eruption to be merely sudamina, and attribute the frequent chills to multiple infarction of the lungs.

My diagnosis is: Pericarditis with effusion; empyema; multiple lung infarcts; focal infection; and septicemia.

**Treatment:** (1) Nutritious liquid diet, with forced fluids; (2) sulfanilamide; (3) sedatives, for pain, and an ice cap to the head or chest; (4) surgical drainage of the chest; (5) bronchoscopic drainage, if a roentgenogram revealed an accessible lung abscess.

Discussion by G. M. Russell, M. D.,  
Billings, Mont.

The first questions to which I should want answers would be: Did she have fever in February, and did the cough and expectoration of salmon-colored sputum continue? What were the findings on percussion and auscultation, besides the friction rub and the fluid in the right side? Did the eruption continue through the illness, or did it follow the giving of some drug?

This case has several possibilities. The dyspnea and orthopnea, increasing in intensity in February, lead one to believe that the patient might have had an influenzal pneumonia, although no mention is made, at this period, of any fever. "As the case progressed she became more cyanotic"; so she must have been cyanotic in the beginning, again suggesting pneumonia involvement.

On the other hand, the presence of fluid in the right pleural cavity would point to some heart difficulty, although the character of the fluid

(purulent) is against this, unless it might have been subacute bacterial endocarditis, which it could easily have been; the pallor and icterus would fit in with this condition. The enlargement of the heart and edema would be further indications of endocarditis; and because of the friction rub at the second interspace, there could have been pericarditis, also.

The swelling and pain of the entire left side does not fit in with any particular syndrome, and as it lasted only three or four days it may be disregarded.

I should have wanted a Wassermann test; examination of the sputum, with typing if pneumococci were found; a blood culture; an electrocardiogram; and a chest roentgenogram.

On the basis of the foregoing analysis of the history presented, I would feel justified in venturing a tentative diagnosis of *subacute bacterial endocarditis*, with some degree of pericarditis.

I would have prescribed sulfapyridine,  $7\frac{1}{2}$  grains (0.5 Gm.) every four hours, which would have been indicated whether the final diagnosis proved to be endocarditis, pneumonia, or some other form of infection.

#### Discussion by W. W. Weltmer, M.D., Beloit, Kans.

It is difficult, for one who is used to having the x-rays for help in a case like this, to venture a diagnosis, but those who are far away from an x-ray machine and other modern facilities have to do their best.

I believe that this woman probably has had a heart disorder all her life, which, with the chronic otitis media and an old fibrotic condition in the chest, flared up early in February, probably with some fluid in the pleura, and went along fairly well until March 20, when she developed pneumonia and died. There is no clue, in the history, to suggest malignant disease.

The management of a case of this kind is not always an easy matter, as finances often will not permit hospitalization, which I believe, in this case, would have been necessary before a diagnosis could be made.

#### Discussion by Dr. Paul F. McRae St. Louis, Mo.

This patient was undoubtedly suffering from a mixed infection. Cultures should have disclosed the nature of the organisms, but the treatment was obviously unsuccessful.

The patient's resistance had become too low, before a diagnosis was reached, for any preparation, generally known, to aid by stimulating the activity of the autoprotective mechanisms of the body.

My treatment would have been, perhaps, decidedly unorthodox—but effective: Octozone.\*

#### Discussion by Moorman O. Robertson, M.D., Bedford, Ind.

This case, to me, is puzzling, and what is said may be far off the track; but some cases among my personal patients also puzzle me, and I'd rather make a mistake on a paper patient than a live one.

This woman had little resistance, it seems, and had always been delicate. Her discharging ear and infected sinuses are and have been a source of general toxemia. There must also have been some

pulmonary involvement of an infectious nature, which may have originated in the ear and sinuses, or may have been an obscure condition, not suggested in the problem. While tuberculosis may have been present, it certainly was not responsible for the severe chills and high temperature.

The swelling of her left side is, to me, unexplainable. I can think of no circulatory disorder which would cause *onesided* swelling. The swelling of her ankles was probably due to a weakened circulation. These are some of the points to be considered in thinking of this case.

I should, if possible, have had the sputum examined under the microscope; also the discharge from the chest, and this should have thrown light on the case. At times, even in these United States, such examinations are impossible, and in such a case I would presume some common germ, acting uncommonly, was the cause of the trouble, and conduct myself accordingly, trying the Sulphonamides; and probably the patient would have succumbed just as she did in the hands of my confrere who presented the problem.

#### Discussion by August Helmbold, M. D., Cincinnati, Ohio

Discussion of this problem is difficult, for one practicing in a locality where x-ray, hospital, and laboratory facilities are readily available to everyone who has enough money. I think that each discussant will agree that x-ray studies, cultures, and smears would reveal the underlying cause; but without them, the case would appear to me to be as follows:

The past history suggests that the patient is a frail woman, susceptible to almost any infection due to her low resistance. A knowledge of her economic status is important, to allow one to determine whether her low resistance is due to a physiologic condition or one caused by malnutrition. The discharging ear indicates an area of infection, which may be the starting point of her septicemic process by metastasis. The purulent pleural fluid and jaundice may be a result of toxic hepatitis. The friction rub in the second left interspace, lessened left chest expansion, and pain indicate a pulmonary infection, either tuberculous or staphylococcal or, in rare cases, malarial, advancing to a chronic condition with cicatrization and thereby decreasing the pulmonary area and pulling the heart to the left. A malarial infection would be of the pernicious or hemorrhagic type, which is characterized by rapid onset; dark, scanty urine; fever; yellow pigmentation; and edema of the feet. I would have differentiated between *staphylococcal septicemia* and *pyemia*, *tuberculosis*, and *malaria*.

*Treatment:* In February or early March, I would give full doses of sulfathiazole for 48 hours, because of its specificity for staphylococcal infections; also one or two injections of some non-specific protein like Omnadine, and medical or surgical treatment of the ear condition. Later I would give quinine sulphate (if the response to the preceding measures were negative), in doses of 30 grains (2.0 Gm.) a day for three days, and then 10 grains (0.65 Gm.) daily if there is a positive response, which would be an indication of the malarial infection. The chest should be aspirated as soon as the presence of fluid is ascertained. If the fluid proved to be purulent, a rib resection should be made. Other treatment would be supportive and symptomatic.

\*Tri-atomic oxygen. See CLIN. MED. & SURG., Sept., 1937, page 393.

### Discussion by Dr. V. L. Hawkins Kansas City, Mo.

The problem seems to be, primarily, one of determining the cause of an empyema in a middle-aged woman who was never in very good health.

The causes of empyema are from five sources: (1) From the lungs; (2) from the mediastinum; (3) from below the diaphragm; (4) from injuries; and (5) from blood-borne infections.

The history seems to point toward a lung or bronchial origin, with the exclusion of the subdiaphragmatic, mediastinal, hematogenous, and traumatic origins.

From the fact that the patient had sinusitis, one must think of a secondary infection of the bronchial passages, leading to *bronchiectasis*, which, however, is characterized by an extensive production of sputum, which separates into three layers when allowed to stand. If the patient's sputum was found to have this quality, x-ray studies of the lungs should have been carried out. If her condition would permit, lipiodol might have been used to outline the bronchial tree, but it should be kept in mind that, if tuberculosis be present, this procedure may prove very harmful.

The next most probable explanation for the physical condition of the patient is *tuberculosis*, with fibrosis of the lungs. This is supported by all the points in the history and physical examination, and may be the underlying cause, even if the presence of bronchiectasis is demonstrated.

The sputum should have been examined frequently for tubercle bacilli, and if they were not found on direct examination, animal inoculations should have been made.

The treatment should have been directed toward the drainage of the cavity and, if tuberculosis was demonstrated, the routine measures for the treatment of this condition.

Incidentally, the *Seminar* is one of the most interesting features I have found in any publication.

### Solution by Dr. McKinley

The icterus, purpura, maculae, and edema of the left arm and breast have, I think, resulted from *malignant endocarditis*, which, no doubt, was an exciting cause of thrombotic or embolic obstruction to some of the large veins of the arm, producing pain and swelling.

Sepsis was probably due to thrombi and the existing empyema of right pleural cavity, and would also account for the severe chills and high temperature, accompanied by exhausting sweats.

There was probably rheumatic mitral disease in early adolescence, which may have contributed to the endocarditis, which, if of the chronic, malignant type, would account for the earlier symptoms of heart disease and associated dyspnea, and would also explain the jaundice as being due to sepsis,

malignant endocarditis being essentially a septicemia.

There was *adhesive pericarditis* with inflammatory fluid, accompanied by mitral involvement, which is common in women, as aortic disease is in men. The friction rub in the second space, on respiration, was probably due to the pericarditis.

The edema of the ankles gives us the picture of exhaustion, and a failing heart muscle.

An autopsy was obtained, and the pathologist's report follows:

- 1.—Chronic endocarditis of the mitral and aortic valves.
- 2.—Chronic adhesive pericarditis.
- 3.—Hypertrophy and dilatation of the heart.
- 4.—Thrombosis of the innominate vein.
- 5.—Thrombosis of a small pulmonary artery, with infarcts of the lungs.
- 6.—Empyema of the right pleural cavity.

### Problem No. 5 (Medical)

Presented by Thomas Bryant Pope, M.D.,  
Kingston, West Va.

THE patient was a woman, 51 years old; 5 feet 6 inches tall; weighing 170 pounds; and very blonde, who had passed the menopause uneventfully and had enjoyed excellent health until the week before I saw her, when she began to have sudden, moderate, cramping, generalized pains in her abdomen, and to pass large, dark, loose stools (as if she had taken a strong cathartic), associated with weakness and faintness, but not actual fainting.

There was no family history of cancer, tuberculosis, or any other chronic or heritable disease, and no personal history that seemed to be pertinent.

The physical examination showed a patient who apparently felt well and did not look ill. Her pulse, temperature, and respirations were normal. A blood study showed: Hemoglobin, 31 percent; red cells, 1,800,000; leukocytes, 4,050, with 69 percent of polymorphonuclears and 31 of lymphocytes. A stained smear showed marked achromia, but no morphologic changes in the red cells.

She was given only small amounts of water by mouth, transfusions, and hypodermoclysis, and seemed to improve, so that, after a few days, she was allowed a liquid diet. Suddenly she began to have severe cramping in her abdomen and to pass large, black stools that contained some bright blood. She went into shock and, although she was given large transfusions and intravenous infusions of fluids, she died in a few hours.

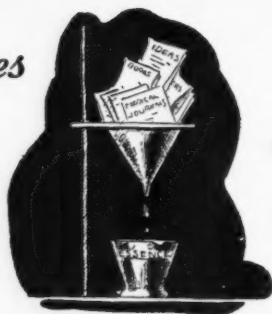
*Requirements:* State your tentative diagnosis, giving reasons; what further examinations you would have made or ordered; and what treatment you would have prescribed.

### WAR IS DRUNKENNESS

War is a world-wide, mass epidemic of drunkenness, worse than alcoholic drunkenness because alcohol is injurious chiefly to the individual, whereas the inebriety of war impairs us all. Both are means of escape from the difficulties of living. The remedy is early experience in doing things, and early personal experience in individual responsibility.—PROF. A. J. CARLSON, Univ. of Chicago.



# Clinical Notes



# and Abstracts

## Sunstroke and Heat Exhaustion

Heat exhaustion is usually brought on by a great loss of salt through sweating. A teaspoonful of salt to the quart of water is the best means of preventing heat exhaustion, if one must drink 12 to 15 glasses of water daily.

Sunstroke is associated with pain in the head, dizziness, dryness of the mouth and skin, red face, rapid pulse, and high body temperature. The patient may become unconscious.

| Sunstroke  | Heat Exhaustion   |
|--|---|
| <i>Cause</i><br>Exposure to heat, especially the sun's rays.   | <i>Cause</i><br>Exposure to heat, indoors or outdoors.  |
| <i>Symptoms</i><br>Red face.<br>Stupor.<br>Temperature high.<br>Skin hot and dry.<br>Pulse strong, rapid.<br>Headache. | <i>Symptoms</i><br>Pale face.<br>Often faint but never long unconscious.<br>Temperature low.<br>Skin moist and cool.<br>Pulse weak.<br>No headache. |
| <i>Treatment</i><br>Lying in shade with head elevated.<br>Cold bath or applications.<br>No stimulants.                 | <i>Treatment</i><br>Lying in shade with head low; give salt.<br>External heat may be required.<br>Stimulants always indicated.                      |

—J. S. LUNDY, M.D., in *Proc. Staff Meet. Mayo Clin.*, Nov. 13, 1940.

## Morphine and Cobra Venom for Pain

Cobra venom may be used in the treatment of severe pain associated with inoperable cancer, as it does not result in mental depression, does not affect the functions of viscera, and does not develop toleration.

If morphine is used, it should be given *only to control pain*. If the patient cannot sleep, give phenobarbital, bromides, or some other sedative or hypnotic drug with the *minimum* dose of morphine that will relieve pain.

Surgical, nursing, and roentgenologic measures for controlling pain should be given precedence over analgesic drugs in those cases where the life expectancy is more than 3 months. Nerve block and spinal injections of alcohol are not major procedures, yet may relieve pain for a long period.—L. E. LEE, JR., M.D., in *J.A.M.A.*, Jan. 18, 1941.

## Symptoms of Hypothyroidism

When a patient has one or more of these symptoms, hypothyroidism should be ruled out:

- 1.—"Can't get started in the morning."
- 2.—"I feel best in mid-day."
- 3.—"Have to drive myself."
- 4.—"Not sure of myself."
- 5.—"Exhausted, weak, or nervous."

When a patient has had one of these diagnoses made, hypothyroidism must be thought of:

- 1.—Nervous indigestion.
- 2.—Nervous exhaustion.
- 3.—Nervous breakdown.
- 4.—Rheumatism.
- 5.—Anemia.
- 6.—Constipation.

—F. S. MOREST, M.D., in *Miss. V. Med. J.*, Jan., 1941.

[Dr. Morest has done a service in pointing out that nervousness is just as common a symptom of hypothyroidism as it is of hyperthyroidism.]—ED.

## Treatment of Vasomotor Rhinitis

VASOMOTOR (allergic) rhinitis may be treated locally with chromic acid. A 5-percent solution of cocaine is first applied to the lower part of the nasal mucosa. Ten minutes later, a small pack of cotton or sterile vaseline gauze is placed in the back on each side of the nose, from the floor to the middle turbinates. A cotton applicator is dipped into 30-percent chromic acid solution, thoroughly squeezed out, and applied to the nasal floor, the inferior turbinates, and the septal mucosa as high as the lower border of the middle turbinate. Only one application is made to each side. The sides of the middle turbinate are avoided, as any medication placed there may injure the olfactory nerve endings.

The mucosa painted with chromic acid soon takes on a yellowish-white appearance. After waiting an hour and fifteen minutes, the nasal plugs at the



back are removed and the patient sent home. Should sneezing occur, it may be controlled by inserting several drops of physiologic saline solution into each nostril, with the patient's head held forward and down, so that none of the solution runs backwards.

About 4 days after the chromic acid treatment, crusts and a bloody discharge will appear; the bleeding is never great.—S. COHEN, M.D., in *E.E.N. & T.M.*, Feb., 1941.

### A New Wet Dressing Solution\*

ALTHOUGH Burow's solution of aluminum acetate has long been a favorite for wet dressing treatments, local irritation occasionally results from it. The lead acetate, which is usually present in excess in Burow's solution, may be the cause.

We recently began using a new wet dressing solution, therapeutically similar to Burow's, whose principal ingredient is aluminum subacetate, the chemotherapeutic action of which is well established. This solution, ready for immediate use, is made by simply mixing a set of two tablets † in water.

The advantages of this new solution over Burow's are: it contains no lead; it is stable; fresh solutions are quickly and easily made up as needed; dose and concentration are uniformly constant.

Being astringent and antiphlogistic, this solution lessens exudation, through its ability to coagulate the albumin in the skin tissues and fluids, and acts more rapidly than common wet dressings, such as aqueous boric acid or magnesium sulphate solutions.

In a series of 50 dermatologic cases, we prescribed 30 minutes of wet dressings, from three to five times daily, as an initial therapeutic procedure. No untoward reactions to this new solution were observed. It was found most useful during the early stages of contact dermatitis and in various cutaneous pyogenic infections.

DRS. O. L. LEVIN AND H. T. BEHRMAN  
New York City

### Sulfanilamide to Prevent Rheumatic Fever

IF a patient survives his first attack of rheumatic fever, he has a good chance of living out his life, if he can be protected from the recurrences which add injury to the heart. These recurrences occur principally during the winter and spring months, when streptococcus infections are most numerous, and occur during this time in an average of 10 percent of patients who have had acute rheumatic fever.

According to the *J.A.M.A.* for February 15, 1941, Dr. Caroline B. Thomas and her associates, of Johns Hopkins Hospital, have reported that, among 55 patients given smaller than therapeutic doses of sulfanilamide twice daily, from November to June each year, between 1936 and 1940, there were no recurrences.

If this finding works out well in other hands, it will be a long step forward in the treatment of rheumatic fever.

\**Indust. Med.*, Feb., 1941

† Domeboro Chemical Co., New York City.

### Insulin in Mental Deficiency

SUPPLEMENTING my clinical report in the April, 1941, issue of *CLINICAL MEDICINE*, page 110, I have just received (Mar. 25, 1941) a communication from the principal of the school for mentally deficient children, which this boy has been attending, stating that his improvement has been so rapid and satisfactory that she thinks her institution is no longer the place for him, and that she is making arrangements to have him entered in a school for normal boys.

When I began treating this patient with insulin, it seemed certain that he would never be able to earn his living, but it now appears that he probably will be able to support himself at some simple occupation which will not require a high degree of initiative or planning, where he can do more or less routine work under supervision.

This seems to be a sound index of the degree of improvement which has occurred in this unusual case.

ROBERT L. PITFIELD, M. D.  
Germantown, Pa.

Look for FACTS AND COMMENTS among the advertising pages at the back.

### Injection of Varicosities

ONE of the bugaboos of the injection treatment of varicose veins has been the much publicized fear of sclerosing veins that were needed as collaterals of thrombosed deep veins. I disregard phlebitis as a contraindication, with two exceptions: (1) when a systemic reaction, such as fever, marked local redness, and swelling is present; or (2) when swelling of the extremity and enlarged compensatory veins are noted. The deep circulation is always tested for an adequate return of the venous flow.

If no pain occurs after the patient has worn an Esmarch rubber bandage, snugly applied from the toes to the knee, for 20 minutes or so, the occlusion which is manifested by the dilatation of the collateral veins, is not sufficient to render treatment of the varices inadvisable.—F. L. SMITH, M.D., in *Minn. Med.*, Mar., 1941.

### Uses of Ultraviolet Rays

ULTRAVIOLET irradiation has been used extensively, but indiscriminately, in the practice of medicine. There is, however, a rather large number of conditions in which there is evidence that ultraviolet irradiation is, or gives promise of being, valuable. Among these conditions may be mentioned tuberculous peritonitis and enteritis; calcium deficiency diseases; secondary anemia; carbon monoxide poisoning; pulmonary tuberculosis (as an adjunct); tuberculosis of bones and joints; atrophic and hypertrophic arthritis (as an adjunct); tuberculosis of the genitourinary tract; ulcerus serpens; corneal ulcer; tuberculous lesions of the eye, ear, or nose; nasal ulcerations; tuberculous laryngitis; rickets; tetany and spasmophilia; and various skin diseases.—FRANK H. KRUSEN, in *Ann. Int. Med.*, Oct., 1940.

# Thumbnail Therapeutics



## Hypertension

● Drugs are useful for secondary symptoms of hypertension—nitrites for anginal pain; morphine for cardiac pain and nocturnal dyspnea; and digitalis for arrhythmia and decompensation—but for the hypertension itself they are of little value. Bromides and barbiturates are reserved for those cases in which nervousness or anxiety seem to be causative factors. *Reassurance* is the most valuable remedy a physician can use.—J. A. RYLE, M.D., in *Proc. Royal Soc. Med.*, Apr., 1940.

## Delirium Tremens

● A single large dose of paraldehyde is given, by rectum, as soon as possible, to the patient with acute delirium tremens. On awakening, he is given a whole ounce of Epsom salts by mouth, followed by a liberal diet of fruit juices, milk, water, and solid foods especially rich in vitamin B (whole-wheat cereals and bread; green vegetables; brewers' yeast tablets). Paraldehyde is repeated as needed, to control excitement and restlessness.—J. N. THOMAS, M.D., in *Med. World* (Lond.), Apr. 5, 1940.

## Discharging Ear (Cholesteatoma)

● In cases of cholesteatoma, the offensive discharge can be controlled with this medication:

|                  |      |             |
|------------------|------|-------------|
| B Acid Salicylic | 0.10 | (gr. 1½)    |
| Alcohol          |      |             |
| Dist. Water      | āā   | 15.00 (3 4) |

Sig: Drop about ten drops into the ear at bedtime, but do not plug with cotton or gauze; leave the ear canal open.—E. E. N. & T. M., May, 1940.

## Prostigmin in Neuritis

● Prostigmin is of definite value in neuritis, its action being that of a tonic to the nerves and, through them, to the muscles they supply.—T. CARROLL DAVIS, M.D., in *E.E.N.&T. Month.*, Sept., 1940.

## Vitamin B in Nephritis

● Two cases of advanced nephritis have been cured by using generous doses of vitamin B complex.—L. E. ASHLEY-EMILE, M. D., in *Med. World* (Lond.), Feb. 14, 1941.

## Hemorrhagic Disease of the Newborn

● Vitamin K should be administered, by mouth, in 2 cc. doses, to babies suffering from hemorrhagic disease of the newborn. Treatment should not be limited to the administration of this precursor of prothrombin when the active substance can be injected into the circulation by means of a blood transfusion.—I. NEWTON KUGELMASS, M.D., in *Arch. Dis. Child.*, June, 1940.

## Epinephrine Electrophoresis in Asthma

● Many pharmacologically active drugs, including epinephrine, may be given electrophoretically, as fast as by the intravenous drip method without the disadvantages of venipuncture.

Epinephrine dihydrogen phosphate is transported by electrophoresis into the skin, with typical local blanching, and is prepared for electrophoresis by dissolving equal amounts of epinephrine base and phosphoric acid so that the final concentration of epinephrine is 1 percent. By giving massive doses, depots are formed and epinephrine is liberated for hours. Severe asthma is prevented or treated by one such treatment, in many cases.—H. A. ABRAMSON, M.D., in *Arch. Phys. Ther.*, May, 1940.

## Testosterone in Prostatism

● In 7 cases of prostatism, testosterone propionate gave marked relief of all symptoms.

This drug is indicated in all such cases where operation would endanger life; where a palliative operation has been unsuccessful; and in mild cases where surgery is not urgent.—MARK J. MARKHAM, M.D., in *Urol. & Cutan. Rev.*, Jan., 1941.

## Intra-osseous Transfusion

● In cases where mutilation, burns, dropsy, shock, and poorly developed or obliterated veins prevent the giving of blood transfusions or other liquids into these vessels, it has been reported by Drs. L. M. Tocantins and J. F. O'Neil, of Jefferson Medical College, Philadelphia, that these solutions, including blood, serum, dextrose, and physiologic saline solution, can be given satisfactorily into the bone marrow. The bones usually employed for this purpose are the sternum, clavicle, femur, and tibia.—*Science News Letter*, March 8, 1941.

## Progesterin in Premenstrual Tension

● Patients who complain of nervousness, irritability, insomnia, and headaches preceding menstruation may be relieved by one or two injections of progesterin.—JOHN J. FREYMAN, M.D., in *Jour. Omaha Clin. Soc.*, Sept., 1940.

## Cobra Venom in Herpes Zoster

● A daily injection of 1 cc. of cobra venom regularly relieves the pain of severe herpes zoster.—M. M. McDOWELL, M.D., in *Med. Rec.*, Mar. 5, 1941.



## THE DOCTOR'S STUDY

*He hath never fed of the dainties that are bred in a book; he hath not drunk ink; his intellect is not replenished; he is only an animal, sensible only in the duller part.*—SHAKESPEARE.

## Cyclopedic Medical Dictionary

Taber

**TABER'S CYCLOPEDIA MEDICAL DICTIONARY.** Including a Digest of Medical Subjects. By CLARENCE WILBUR TABER, author, "Taber's Dictionary for Nurses," etc., and Associates. 273 illustrations. Philadelphia: F. A. Davis Company. 1940. Price, \$2.50; \$3.00 with thumb index.

**A**LTHOUGH the editor of this volume never completed his medical studies, he has devoted many years to studying and writing medical literature, which he knows far better than most physicians.

In this compact and well-made book he gives the medical and allied professions the benefit of his wide scholarship, in a form that is much more than a dictionary (though as a lexicon it is adequate to the needs of most practicing clinicians), including a variety of information such as is found in large cyclopedias, which will frequently obviate the necessity of referring to a textbook. Some subjects are given several pages.

In addition to the features found in all good dictionaries, one will find, among other helpful things omitted from lexicons, not merely definitions of disease, but also descriptions of them; an adequate treatise on all forms of first aid; descriptions of all important parts of the body and their functions; cross references to related subjects; an "Interpreter," showing how to ask a patient 370 questions in five languages; and many others.

By eliminating hundreds of obsolete words and those pertaining to strictly limited specialties, it has been possible to include all this information in a volume of such size that it can be kept on the physician's desk or carried in his handbag. There are few books that will give a doctor such large value for so small a price.

## Diagnosis and Treatment of Arthritis

Margolis

**DIAGNOSIS AND TREATMENT OF ARTHRITIS AND ALLIED DISORDERS.** By H. M. MARGOLIS, M.D., M.S. (in Med.), F.A.C.P., Chief, Arthritis Service, St. Margaret Memorial Hospital; Associate in Medicine, Montefiore Hospital. 130 illustrations. New York: Paul H. Hoeber, Inc., Medical Book Department of Harper & Brothers. 1941. Price, \$7.50.

**T**HIS book is practical, well illustrated guide to the management and diagnosis of the rheumatic diseases.

## New Books

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, Waukegan, Ill., is accompanied by a check for the published price of the book.

It shows what can and should be done in the care of patients suffering from arthritis and related disorders, including sciatic and low back pain. One chapter shows the factors responsible for deformities and the means by which they can be prevented or corrected. Many photographs depict the technics.

Newer concepts of treatment, foci of infection, gold, bee venom, and sulfanilamide therapy are fully discussed.

The chapter on physical therapy in arthritis covers a wide field in the most superficial manner. Massage is discussed in one page, with no mention or photographs of technics. Occupational therapy is dismissed with 2 lines. Instructions are given for building an inexpensive baker for home use. References are constantly made to other texts, in this chapter.

The many photographs showing methods of preventing deformities are clear and instructive. Roentgenograms are reproduced well and the general physical makeup of the book is excellent.

## Beginnings of Life

Beutner

**LIFE'S BEGINNING ON THE EARTH.** By R. REUTNER, M.D., Professor of Pharmacology of the Hahnemann Medical College and Hospital of Philadelphia. Baltimore: Williams and Wilkins Co. 1938. Price, \$3.00.

**T**HE age-old, perplexing question of "chick or egg" priority here assumes a practical form, based on scientific research. Only recently have scientists, whose research in the field of chemistry is acceptable, assembled and organized comparative studies in crystallization, the carbon derivatives, the virus, and complex inanimate forms. Coordinated findings are discussed and compared in this volume.

According to Haler, by means of electric discharges through carbon-containing gases, practically, "any substance known to organic chemistry can be formed." And, in the opinion of Oparian, structural units, with a remote resemblance to living organisms, were formed from the organic matter of early oceans; enzymes, which possessed the properties of assimilation and propagation developed in them; enzyme produced enzyme, and the oceans were filled with material more and more closely resembling the substance of living plants and animals; then, very slowly, the forces of crystallization and of osmosis acted on this material and living organisms appeared.

The phenomenon of growth and movement, artificially pathogenesis, and mitogenic rays are included in the volumes, but no explanation of life, itself, is offered. A. N.

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